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L3: Entry 20 of 25

File: EPAB

Oct 10, 1991

PUB-NO: DE003583987A1

DOCUMENT-IDENTIFIER: DE 3583987 A1

TITLE: TITLE DATA NOT AVAILABLE

PUBN-DATE: October 10, 1991

APPL-NO: DE03583987

APPL-DATE: October 31, 1985

PRIORITY-DATA: DE03583987A (October 31, 1985)

INT-CL (IPC): A61K 37/02; C07K 7/10; C12P 21/02

**ABSTRACT:**

A new antibiotic, designated epidermin (I), has the prim. structure: *Staphylococcus epidermidis* DSM 3095, which is resistant to (I), is new. (I) is made by aerobic cultivation of DSM 3095 at 34-37 deg.C on a complex nutrient soln. contg. 2-4% N source (e.g meat extract), 1-3% sugar or sugar alcohol; 0.25-1% alkaline earth carbonate and/or 0.25-0.5% alkaline earth hydroxide. The cells and inorganic salts are removed, then (I) isolated by (a) extracting with butanol at pH 8, evaporating the extract, dissolving the residue in MeOH and pptn. of lipids with ether or (b) adsorbing onto acrylic ester or polystyrene polymers, eluting with 99:1 MeOH-concn. H<sub>2</sub>SO<sub>4</sub>, neutralising with NH<sub>3</sub> and evaporating in vacuo. The isolate is then chromatographed on 'Sephadex LH-20'(RTM) to remove low mol.wt. peptides amino acid and salts, and subjected to liq-liq partitioning first in 3:1:3 n-butanol/ethyl acetate/0.1N acetic acid ((I) remaining at the starting position) and then in the neutral system 1:1 2-butanol/0.05N NH<sub>4</sub> acetate. Purified (I) is recovered as a colourless powder by freeze-drying.

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L3: Entry 24 of 25

File: DWPI

Jun 10, 1997

DERWENT-ACC-NO: 1990-016158

DERWENT-WEEK: 199944

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TITLE: Isolating epidermin from staphylococcus epidermidis culture - by adsorption on styrene! based copolymer, elution and chromatography on cation exchanger, useful as antibiotic for treating skin infections

INVENTOR: FIEDLER, H; HOERNER, T ; JUNG, G ; KELLNER, R ; WERNER, R ; ZAEHNER, H ;  
FIEDLER, H P ; HORNER, T ; KELLNER, J R ; WERNER, R G ; ZAHNER, H

PATENT-ASSIGNEE:

ASSIGNEE

CODE

THOMAE GMBH KARL

THOM

PRIORITY-DATA: 1988US-0219698 (July 15, 1988)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
KR 9709289 B1	June 10, 1997		000	C07K001/14
EP 350810 A	January 17, 1990	G	018	
AU 8938103 A	January 18, 1990		000	
PT 91171 A	February 8, 1990		000	
DK 8903506 A	January 16, 1990		000	
JP 02084194 A	March 26, 1990		000	
ZA 8905362 A	March 27, 1991		000	
EP 350810 B1	September 29, 1993	G	021	C07K001/14
DE 58905744 G	November 4, 1993		000	C07K001/14
ES 2059645 T3	November 16, 1994		000	C07K001/14
IE 62402 B	January 25, 1995		000	C07K001/14
CA 1336896 C	September 5, 1995		000	C12P021/02
JP 2777205 B2	July 16, 1998		012	C12P021/02

DESIGNATED-STATES: AT BE CH DE ES FR GB GR IT LI LU NL SE AT BE CH DE ES FR GB GR IT LI  
LU NL SE

CITED-DOCUMENTS:1.Jnl.Ref; A3...9139 ; EP 181578 ; EP 27710 ; No-SR.Pub

## APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
KR 9709289B1	July 15, 1989	1989KR-0010095	
EP 350810A	July 7, 1989	1989EP-0112446	
JP02084194A	July 14, 1989	1989JP-0182372	
ZA 8905362A	July 14, 1989	1989ZA-0005362	
EP 350810B1	July 7, 1989	1989EP-0112446	
DE58905744G	July 7, 1989	1989DE-0505744	
DE58905744G	July 7, 1989	1989EP-0112446	
DE58905744G		EP 350810	Based on
ES 2059645T3	July 7, 1989	1989EP-0112446	
ES 2059645T3		EP 350810	Based on
IE 62402B	July 14, 1989	1989IE-0002283	
CA 1336896C	July 14, 1989	1989CA-0605673	
JP 2777205B2	July 14, 1989	1989JP-0182372	
JP 2777205B2		JP 2084194	Previous Publ.

INT-CL (IPC): A61K 0/00; C07G 11/00; C07K 1/14; C07K 3/12; C07K 7/10; C07K 15/04; C07K 17/10; C12N 11/08; C12P 1/04; C12P 21/02; C12R 1/45; C12P 21/02; C12R 1/45; C12P 21/02; C12R 1/45

ABSTRACTED-PUB-NO: EP 350810A

## BASIC-ABSTRACT:

the polypeptide antibiotic epidermin (I) is isolated and purified from a culture of a *Staphylococcus epidermidis* strain by (a) applying the culture broth or filtrate to a styrene-divinyl copolymer (A), (2) eluting active ingredients with MeOH-dil HCl, (3) adjusting eluate to pH 5.3-5.8; (4) applying to a weak cation exchanger (B) (5) washing-out non-bound cpds. with pH7 buffer, (6) eluting (I) with pH 6-8 buffer contg. and MeOH, (7) readsorbing (I) onto (A) washing the resin with water (desalting) and eluting with MeOH-MeCOOH mitd., (8) evaporating or freeze-drying the eluate, and opt. (9) further purifying by h.p.l.c.

The *S. epidermidis* strains used are pref. DSM 3095 or NC18 11536.

USE/ADVANTAGE - (I) is known for treatment of skin infections such as eczema, impetigo, cellulitis and acne. This method is simple and produces significantly higher yields of (I) than known processes.

ABSTRACTED-PUB-NO:

EP 350810B

## EQUIVALENT-ABSTRACTS:

Process for isolating epidermin from a culture broth or a culture filtrate of a strain of *Staphylococcus epidermidis* and for purifying this substrate, characterised in that (a) the culture filtrate or culture broth is added to a styrene-divinyl copolymer, (b) the active component is released from the resin by

elution with methanol/diluted hydrochloric acid, (c) the eluate is adjusted to a pH of 5.3 to 5.8, (d) the eluate is placed on a weak cation exchanger, (e) non-bound substances are subsequently washed out with a buffer solution at pH 7, (f) the active component is eluted out of the cation exchanger with a solution consisting of buffer substance, sodium chloride and methanol at pH 6.0 to 8.0 and for purification washed with water in order to remove salts and the epidermin is released from the resin with a methanol/acetic acid mixture and the solution is evaporated or freeze-dried, whilst the epidermin thus obtained may subsequently also be subjected to high performance liquid chromatography for extra purification.

CHOSEN-DRAWING: Dwg.0/10 Dwg.0/10

TITLE-TERMS: ISOLATE STAPHYLOCOCCUS CULTURE ADSORB POLYSTYRENE BASED  
COPOLYMER ELUTION CHROMATOGRAPHY CATION EXCHANGE USEFUL ANTIBIOTIC TREAT  
SKIN INFECT

DERWENT-CLASS: A96 B04 D16

CPI-CODES: A04-B10; A04-C04; A12-M03; A12-V; A12-W11L; B02-E; B11-B; B11-C08D2; B12-A07;  
D05-C02;

CHEMICAL-CODES:

Chemical Indexing M1 \*01\*

Fragmentation Code

H1	H100	H101	H181	H182	H4	H401	H481	H8	J0
J011	J012	J1	J171	J172	K0	L2	L250	M280	M311
M312	M313	M314	M315	M321	M331	M332	M333	M340	M342
M343	M349	M381	M391	M421	M510	M520	M530	M540	M620
M720	M903	N131	N161	Q233	V050	V901	V913	V923	

Ring Index

63917

Registry Numbers

1327U 0502U

POLYMER-MULTIPUNCH-CODES-AND-KEY-SERIALS:

Key Serials: 0231 0306 3162 0418 1123 2020 2569 3264 3272 2769

Multipunch Codes: 014 034 04- 055 056 074 075 077 128 231 27& 473 53& 532 533  
54& 623 624 642 645 720

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C1990-006930

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starting with: PEPTIDE\$(PEPTIDE/CFA).P29-P90,P92-P94,P24-P28,P21-P23,P1-P19.

**Search Results -**

Terms	Documents
epidermidis same (protein\$ or polypeptide\$ or peptide\$) same (isolat\$4 or purif\$4)	25

Database: 

US Patents Full-Text Database	▲
US Pre-Grant Publication Full-Text Database	▲
JPO Abstracts Database	▲
EPO Abstracts Database	▲
Derwent World Patents Index	▲
IBM Technical Disclosure Bulletins	▼

Refine Search:

epidermidis same (protein\$ or  
polypeptide\$ or peptide\$) same (isolat\$4  
or purif\$4)

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Today's Date: 1/23/2002

<u>DB Name</u>	<u>Query</u>	<u>Hit Count</u>	<u>Set Nam</u>
USPT,PGPB,JPAB,EPAB,DWPI	epidermidis same (protein\$ or polypeptide\$ or peptide\$) same (isolat\$4 or purif\$4)	25	<u>L3</u>
USPT,PGPB,JPAB,EPAB,DWPI	epidermidis same (protein\$ or polypeptide\$ or peptide\$) same fibrinogen	1	<u>L2</u>
USPT,PGPB,JPAB,EPAB,DWPI	epidermidis same (protein\$ or polypeptide\$ or peptide\$)	148	<u>L1</u>